

### **AMENDMENTS TO THE CLAIMS**

Please amend the claims as follows:

#### **LISTING OF CLAIMS:**

Claim 1 (Currently amended). A fermentation method of astaxanthin using *Phaffia rhodozyma* comprising the steps of: (a) in the growing phase, feeding of a nutrient medium containing glucose or sucrose based on the specific growth rate ( $\mu$ ) of *Phaffia rhodozyma* cells, and (b) in the astaxanthin production phase, feeding of the nutrient medium based on the astaxanthin production rate, while keeping the glucose concentration in the fermentation broth at almost 0 g/L during the whole fermentation period.

Claim 2 (Original). The fermentation method according to claim 1, wherein the fermentation is carried out at a  $\mu$  range between 0.01 and 0.10 h<sup>-1</sup>.

Claim 3 (Original). The fermentation method according to claim 1, wherein the pH control reagent is NH<sub>4</sub>OH solution, NaOH solution or both.

Claim 4 (Original). The fermentation method according to claim 1, wherein the fermentation is carried out at a pH between 4.5 and 7.0.

Claim 5 (Original). The fermentation method according to claim 1, wherein the fermentation is carried out at a temperature in the range of from 15 to 24° C.

Claim 6 (Original). The method according to claim 1, wherein the fermentation is carried out at DO between 10 and 90%.

Claim 7 (Currently Amended). The fermentation method according to claim 1, wherein the nutrient medium ~~contains as~~ has at least one carbon energy sources source selected from the group consisting of polymerized forms of glucose, sucrose and other polysaccharides, molasses and corn syrup, glycerol and other polyols, and carboxylic acids, and, ~~as at least one nitrogen sources,~~ source selected from the group consisting of yeast extract, meat-extract, peptone, casein, corn steep liquor, urea, amino acid, nitrates, and ammonium salts ~~and the like~~.

Claim 8 (Original). The fermentation method according to claim 1, wherein the concentration of D-glucose or sucrose in the nutrient medium is from about 10 g/L to about 800 g/L.

Claim 9 (Original). The fermentation method according to claim 1, wherein the fermentation is carried out at gassing rates of about 0.01 to about 2.0 volume of gas/volume of medium/min. in the fermentation vessel.

Claim 10 (Original). The fermentation method according to claim 1,  
wherein *Phaffia rhodozyma* is *Phaffia rhodozyma* ATCC96594.